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## Some Staphylinid Beetles from the Hidaka Mountains in Hokkaido, Japan

By

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渡辺 泰明\*：日高山系から採集された数種のハネカクシ

Until now, no staphylinid beetles have been reported from the Hidaka mountains in Hokkaido, northern Japan. Towards the end of July, 1971, the author had an opportunity of investigating the staphylinid fauna of the northern part of the Hidaka mountains as a member of the second research party organized by the Natural History Research Project of the National Science Museum, Tokyo. During the survey staphylinid beetles were obtained in Mt. Poroshiri-dake and its adjacent areas by Dr. J. AOKI, Professor R. YOSII and the author himself. This collection contains some interesting species, two of which appear to be new to science and one to be a new addition to the staphylinid fauna of Japan. They will be described in this paper.

Before going further the author wishes to express his hearty thanks to Professor Hiro-masa SAWADA of Tokyo University of Agriculture, for his constant guidance, and to Dr. Shun-Ichi UENO of the National Science Museum, Tokyo, for his valuable advice for the present study. Deep acknowledgement is also due to Professor Riozo YOSII of Kyoto University and Dr. Jun-ichi AOKI of the National Science Museum, Tokyo, for their kind aid in seeking for staphylinid beetles in the field.

### ***Psephidonus aokii* Y. WATANABE, sp. nov.**

(Figs. 1-2)

Length: 3.8 mm (from front margin of head to anal end).

Body relatively broad, nearly spindle-shaped and somewhat depressed above. Colour black, considerably shining; antennae reddish brown, excepting proximal three segments which are somewhat paler; legs as well as mouth parts yellowish brown, though apical parts of femora and tibiae are more or less infuscate.

Head evidently transverse, but slightly narrower across eyes than pronotum (1:1.14), with postocular region scarcely shorter than the longitudinal diameter of eye (1:1.17), rounded and well contracted towards base; surface sparingly scattered with rather coarse punctures and fringed with golden pubescence; frons distinctly and subquadrately depressed

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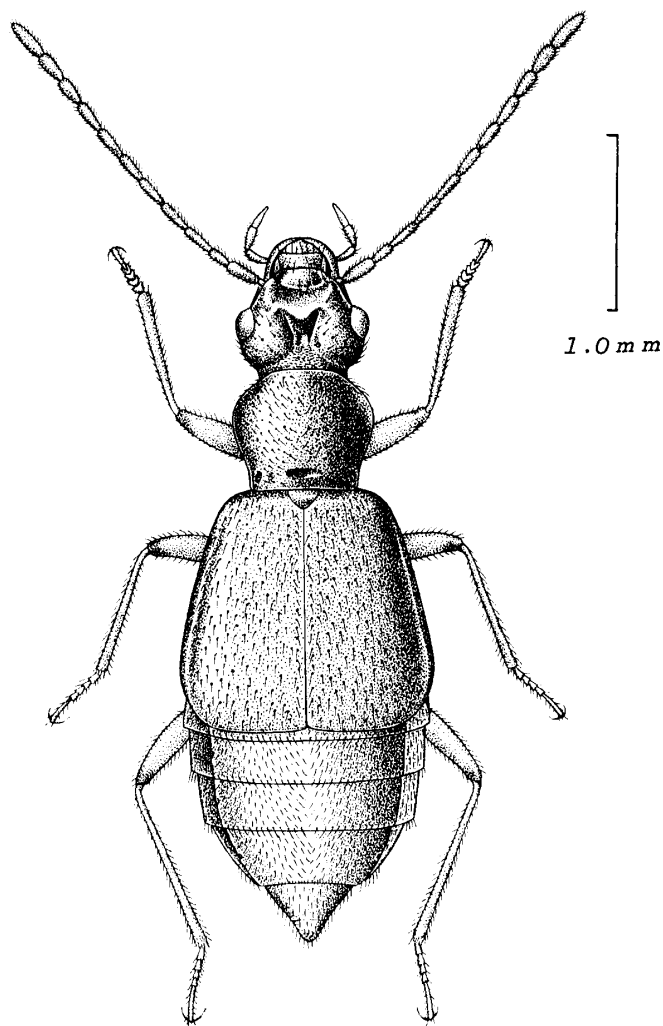


Fig. 1. *Psephidonus aokii* Y. WATANABE, sp. nov., ♂, of the north cirque on Mt. Poroshiri-dake.

along front margin between antennal tubercles, surface of the depression being nearly flat and smooth but furnished with a few golden pubescence; vertex largely and deeply depressed, the depression being connected with neck which is covered with fine but distinct coriaceous ground sculpture all over, and within the depression there is a pair of deep oblique furrows converging towards base; ocelli distinct, a little nearer to each other than the distance from outside of each ocellus to the inner margin of compound eye, which is relatively large and somewhat prominent. Antennae long and relatively slender, nearly reaching apical margin of elytra and not thickened apicad, with proximal three segments polished and the remainings opalescent; 1st segment robust, 2nd shortest, 3rd 1.3 times as long as 2nd, 4th to 10th subequal in length to one another and nearly twice as long as width in each, the apicalmost elongate and almost 1.5 times as long as the penultimate.

Pronotum subcordate and well convex above, somewhat transverse (1:1.23) and remarkably smaller than elytra, widest at about anterior one-third, abruptly contracted at base

but gently so towards apex; lateral sides finely but distinctly bordered throughout, the fine border continuing onto straight basal margin, apical three-fourths arcuate and deflexed but basal one-fourth almost straight; anterior angles not visible from above and posterior angles nearly rectangular; surface rather sparingly with somewhat coarse punctures and covered with golden pubescence decumbent backwards, and provided with a transverse fovea at the middle before basal margin and also with a small impression inside each basal angle. Scutellum subtriangular, smooth and impunctate all over. Elytra nearly trapezoidal and flat, scarcely broader than long (1.12:1) and obviously dilated towards apex; lateral sides almost straight, posterior angles broadly rounded off; surface coarsely, moderately and closely punctured and covered with golden pubescence as on pronotum.

Abdomen broad and flat, nearly as wide as elytra, widest at basal visible segment and strongly narrowed towards apical end; surface of each tergite covered with fine coriaceous ground sculpture, and scattered not so closely with fine punctures and also with golden pubescence, which is closer than that on elytra; last abdominal sternite in male broadly and shallowly emarginate at the middle of hind margin, but without such a structure in female. Legs rather slender, front tarsi slightly widened in male; claws moderately developed in all tarsi.

Male genital organ trilobed and somewhat sclerotized. Median lobe elongate, with basal part relatively large, rather globular and curving to ventral side; viewed ventrally,

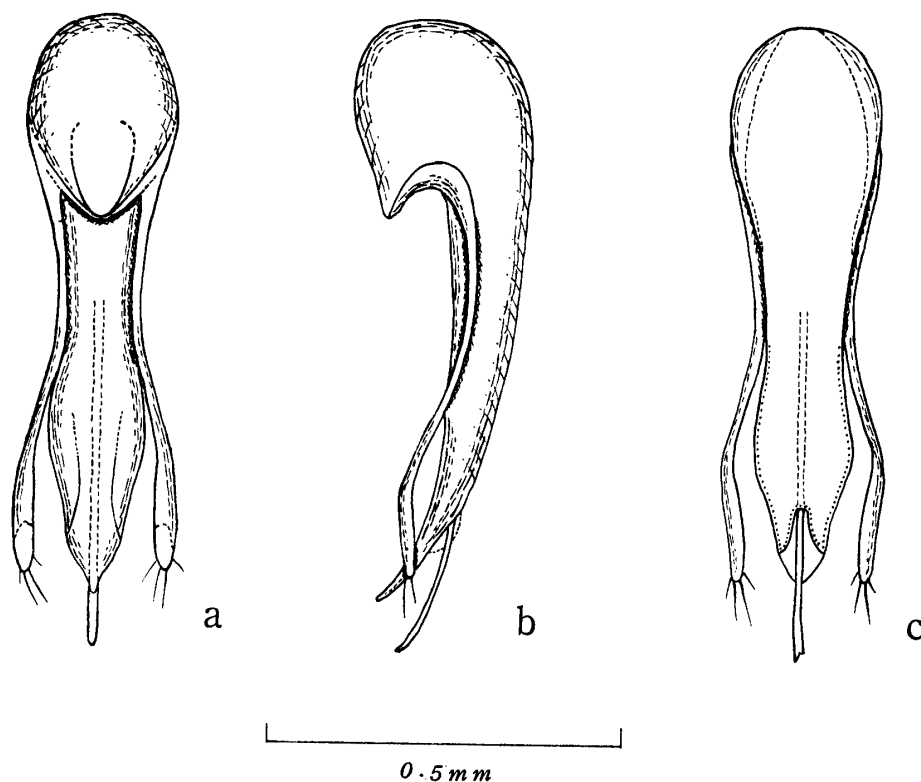


Fig. 2. Male genital organ of *Psephidonus laokii* Y. WATANABE, sp. nov., of the north cirque on Mt. Poroshiri-dake (a, ventral view; b, lateral view; c, dorsal view).

median lobe nearly parallel-sided in basal half and somewhat dilated behind the middle, somewhat emarginate both in front and behind that dilated part, apical part somewhat curving ventrally in profile and slightly projecting backwards but not so acutely pointed at its tip, ventral side smooth. Parameres symmetrical, slender and scarcely shorter than median lobe, gradually dilated apicad, each paramere fringed with four short setae at apex.

*Type-series.* Holotype: ♂, north cirque (alt. 1,800 m) on Mt. Poroshiri-dake in the Hidaka mountains, Hokkaido, 26-VII-1971, Y. WATANABE leg., deposited in the collection of the National Science Museum, Tokyo. Allotype: ♀, near Poroshiri-sansô (alt. 1,100 m) at the NW foot of Mt. Poroshiri-dake in the Hidaka mountains, Hokkaido, 27-VII-1971, Y. WATANABE leg., in the collection of the Entomological Laboratory, Tokyo University of Agriculture.

*Distribution.* Japan (Hokkaido).

The present new species is somewhat allied to *P. suenisoni* (BERNHAEUER) from Kamikôchi in both size and coloration of the body, but it may be distinguishable from the latter by more shining body, sparser and much finer punctures on pronotum, and by the different structure of male genital organ.

Two examples of the present new species were found together with *Philydrodes puncticolis* from under small stones along a stream near the hut called 'Poroshiri-sansô', situated at an altitude of about 1,100 m at the northwestern foot of Mt. Poroshiri-dake.

This species is named after Dr. Jun-ichi AOKI, who kindly collaborated with the author in searching for this new species in the field.

### ***Pseudopsis sulcata* NEWMAN**

(Figs. 3-4)

*Pseudopsis sulcata* NEWMAN, 1834, Ent. Mag., 2, p. 314.

Other references are omitted.

Length: 3.9 mm (from front margin of head to anal end).

Body moderately depressed and parallel-sided; surface dull, though abdomen is slightly shining. Colour blackish brown; head black; pronotum, broadly in lateral margin and narrowly both in front and basal margins, reddish brown; antennae as well as legs yellowish brown.

Head subpentagonal, somewhat depressed above and evidently transverse (1:1.39), with lateral sides almost straight or feebly arcuate behind eyes but remarkably contracted in front of eyes; front margin bisinuate; whole surface finely, densely, longitudinally strigose and glabrous; disk broadly depressed throughout, middle of the depression longitudinally elevated in anterior half along median line and posterior half of the elevation finely keeled, both sides of median line before base having a pair of short and oblique keels divergent posteriorly, a definite longitudinal keel present above each eye from antennal tubercle to constriction of neck, and four pairs of somewhat club-shaped setae on either sides, one front marginal, one supra-ocular, one temporal and one vertexal; eyes rather large and somewhat prominent, their longitudinal diameter almost as long as postocular region. Neck well

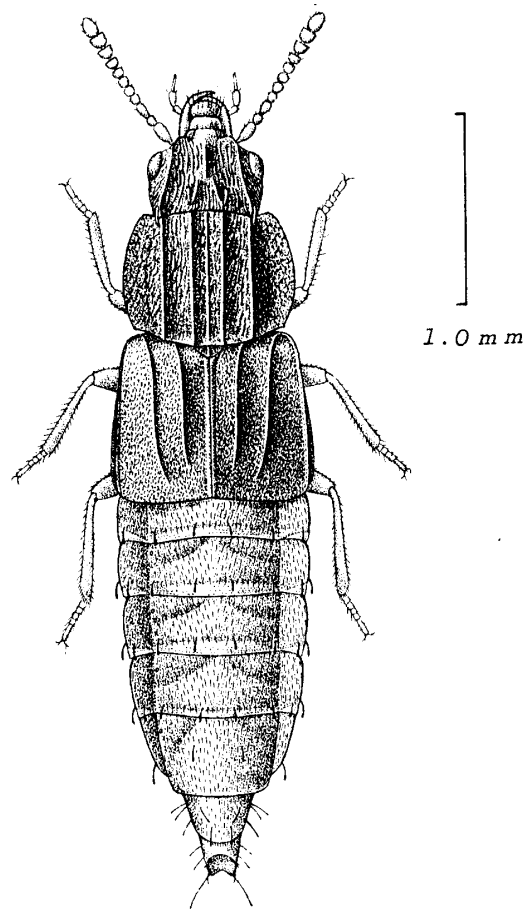


Fig. 3. *Pseudopsis sulcata* NEWMAN, ♀, of the north cirque on Mt. Poroshiri-dake.

contracted; surface covered with longitudinal striga as on head and with a fine longitudinal keel along the median line. Antennae rather short, hardly reaching backwards to the middle of pronotum, proximal two segments polished and the remainings opalescent; 1st segment robust and strongly dilated apicad, 2nd globular and much smaller than 1st, 3rd narrower than 2nd and clavate, 4th and 5th subequal in length to each other and nearly as long as broad in each, 6th to 10th transverse, gradually increasing in breadth, the apicalmost oval and a little longer than the penultimate.

Pronotum subquadrate and convex above, distinctly transverse (1:1.36) and considerably broader than head (1.52:1), widest behind middle, narrowed basad and more feebly so towards apex; lateral margin gently rounded and very finely bordered, front margin slightly emarginate and basal margin broadly rounded and somewhat produced backwards, anterior angles narrowly rounded and posterior ones minutely dentate at the tips; surface covered with longitudinal striga as on head, provided with four strong, parallel, equidistant and longitudinal keels throughout, and also with a much finer keel along the median line though sometimes abbreviated in front. Scutellum semicircular; surface punctate, bearing a longitudinal keel at the middle. Elytra nearly square and depressed above, somewhat longer (1:1.21) and slightly broader than pronotum (1:1.11); each elytron with four keels,

one sutural, one lateral and two discal, each of the latter feebly outwardly arcuate near base and abbreviated before hind margin, posterior part almost straight in the inner keel but somewhat inwardly arcuate in the outer one; interspace of keels superficially but roughly sculptured as on the surface of pronotum.

Abdomen elongate, gradually narrowed towards anal end; surface of each tergite, excepting the apicalmost which is provided with some fine bristles around arcuate margin, finely and moderately closely punctured and covered with fine yellowish pubescence, bearing a pair of oblique impression from the middle of base towards apical angles; six club-shaped setae present near the posterior margin of each tergite, and a pair of such setae present on each sternite. Legs rather short, tibiae finely shortly spinose; tarsi five-segmented and thin.

Male genital organ trilobed and nearly membranous, excepting moderately sclerotized parameres. Median lobe elongate, with basal part relatively large and more or less globular, apical part somewhat curved ventrally; viewed ventrally, median lobe almost parallel-sided in basal three-fifths but abruptly convergent from apical two-fifths to narrowly rounded apex; ventral side smooth. Parameres slender and symmetrical, a little shorter than median lobe, gradually tapering towards spine-like apex in each.

*Specimens examined.* 4♂♂, 7♀♀, near Poroshiri-sansô at the northwestern foot of Mt. Poroshiri-dake in the Hidaka mountains, Hokkaido, 24 & 27-VII-1971, Y. WATANABE leg.; 4♂♂, 6♀♀, north cirque on Mt. Poroshiri-dake in the Hidaka mountains, Hokkaido, 25-VII-1971, J. AOKI & Y. WATANABE leg.; 1♀, Nanatsunuma cirque between Mt. Poroshiri-dake and Mt. Tottabetsu-dake, 26-VII-1971, Y. WATANABE leg.

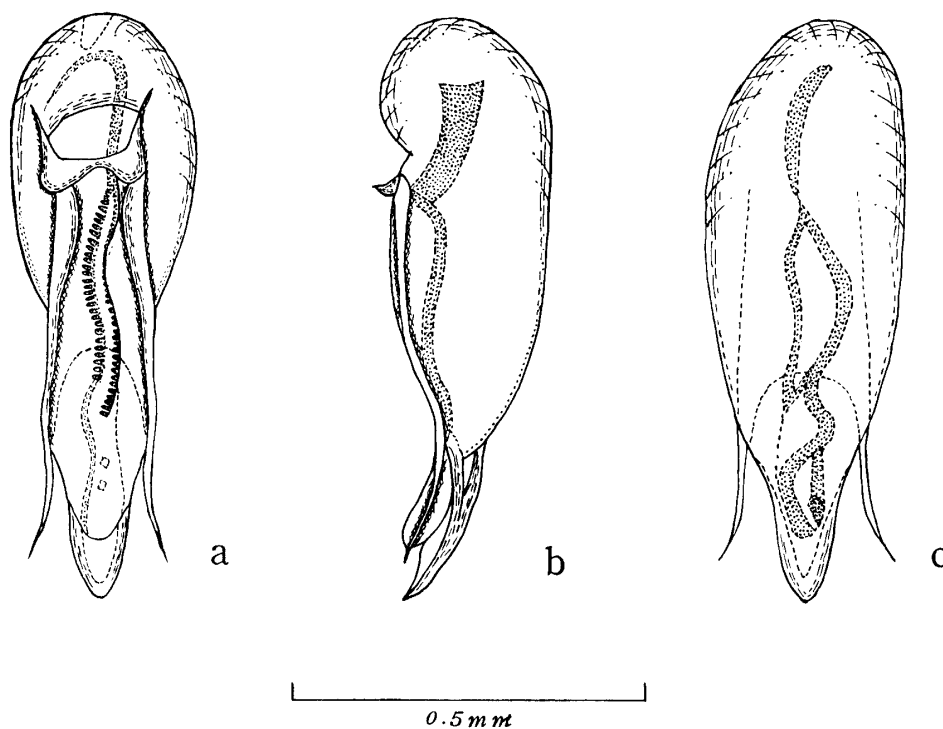


Fig. 4. Male genital organ of *Pseudopsis sulcata* NEWMAN, of the north cirque on Mt. Poroshiri-dake (a, ventral view; b, lateral view; c, dorsal view).

**Distribution.** Japan (Hokkaido); West Siberia, Europe, England, Western Himalayas, East India, North Africa, North America.

This peculiar species was discovered at two different habitats. A half the examples seen were obtained from under dead leaves accumulating on the ground of a cold temperate mixed forest near Poroshiri-sansô. The others were found in droppings of the chipmunk, *Tamias sibiricus lineatus* SIEBOLD, lying under thickets of alpine plants at an altitude of about 1,800 m on the eastern slope in the north cirque of Mt. Poroshiri-dake.

Although this species has been known to occur at various localities in the Northern Hemisphere, it has not been recorded from Japan until now.

**Lobrathium (Lobrathium) riozoi** Y. WATANABE, sp. nov.

(Figs. 5-7)

Length: 4.2 mm (from front margin of head to anal end).

Body relatively narrow, nearly parallel-sided and moderately depressed above. Colour light reddish brown, moderately shining; legs as well as palpi somewhat paler.

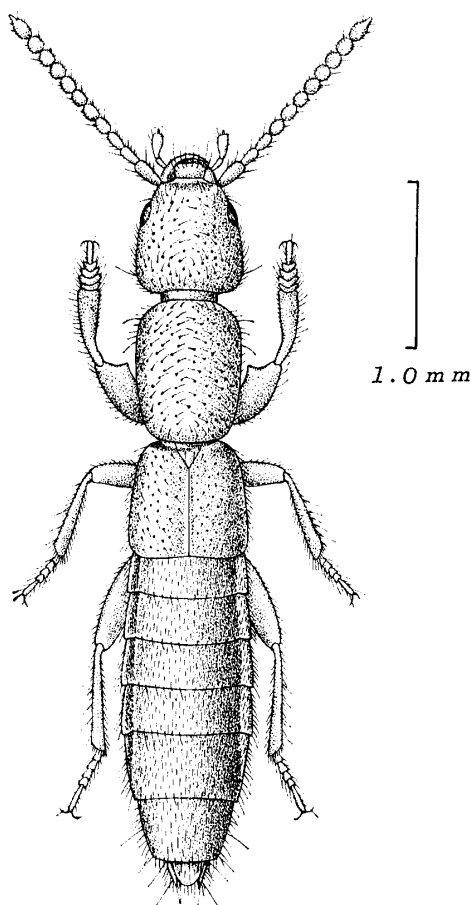


Fig. 5. *Lobrathium (Lobrathium) riozoi* Y. WATANABE, sp. nov., ♂, near Poroshiri-sansô at the NW foot of Mt. Poroshiri-dake.

Head subquadrate, somewhat depressed above, almost as long as broad and a little narrowed in front, with lateral sides feebly arcuate anteriorly and well contracted at neck; disk covered with microscopic alutaceous ground sculpture and sparsely scattered with distinctly setiferous punctures; latero-posterior parts also covered extensively with setiferous punctures which are more numerous than on the disk, the bristles being brownish and decumbent forwards; eyes very small and flat, longitudinal diameter of each only one-fifth as long as postocular region. Antennae relatively short, not reaching backwards to the basal margin of pronotum and not thickened apicad, proximal one or two segments polished and the remainings somewhat opalescent; 1st robust and evidently dilated, 2nd and 3rd subequal in length to each other and dilated apicad in each, 4th to 7th each more or less ovoid and gradually decreasing in length, 8th to 10th nearly as long as broad in each, the apicalmost nearly 1.5 times as long as the penultimate and subacuminate towards the tip.

Pronotum oblong and slightly convex above, almost as broad as head, widest behind anterior angles and rather abruptly narrowed apicad but feebly so basad; lateral sides finely bordered throughout, the fine border as well as anterior angles not visible from above, the border continuing onto almost straight basal margin, apical one-fourth rounded and deflexed, but basal three-fourths nearly straight though slightly emarginate at middle and feebly arcuate near posterior angles which are broadly rounded off; surface without ground sculpture but sparingly scattered with rather coarse setiferous punctures, bearing a broad longitudinal smooth band along median line, of which the basal part is sometimes very obsoletely and longitudinally impressed. Scutellum small and triangular, almost impunctate but sometimes bearing several (usually two) setiferous punctures. Elytra almost as long as broad and slightly shorter than pronotum (1:1.14), distinctly dilated behind; surface somewhat uneven, sparsely scattered with minute and rough punctures, and with sparing pubescence; hind margin slightly emarginate.

Abdomen narrow and elongate, nearly parallel-sided, though widest at fourth visible

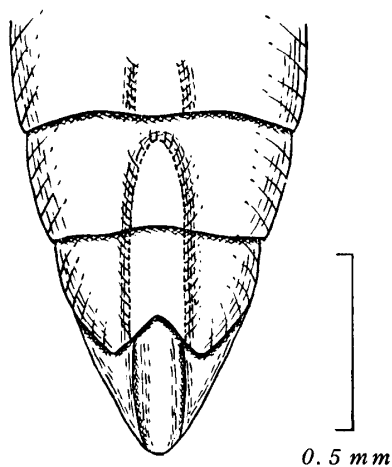


Fig. 6. Last four abdominal sternites of *Lobrathium* (*Lobrathium*) *rioxoi* Y. WATANABE, sp. nov., male, near Poroshiri-sansô at the NW foot of Mt. Poroshiri-dake.



segment and gradually narrowed both basad and apicad; surface of each tergum covered with microscopic ground sculpture visible under high magnification, and with rather close brownish pubescence which is somewhat thicker than those of elytra and decumbent backwards; basal four visible segments fringed with a relatively long blackish seta at each side of respective tergum, though sometimes missing; last abdominal sternite in male subtriangularly excised at the middle of hind margin, and provided with a shallow longitudinal depression in front of the excision, the surface of this depression is impunctate; penultimate sternite also broadly and shallowly emarginate at the middle of hind margin, and with a long horse-shoe-shaped and shallow depression in front of the emargination, though the surface of the depression is impunctate; surface of fourth visible sternite slightly flattened at the middle before hind margin; in female sternites are simple. Legs relatively short, anterior femora remarkably thickened, and armed with a broad blunt tooth near the apical one-third on the inner face of each femur in both sexes; protibiae dilated apically, and basal half of each with a distinct groove, within which there is dense short golden pubescence, meso- and metatibiae normal in shape; 1st to 4th protarsal segments somewhat widened in both sexes; meso- and metatarsi thin.

Male genital organ nearly spindle-shaped and feebly sclerotized. Median lobe relatively broad, gradually narrowed apically but abruptly convergent near apex, apical portion slightly curved ventrally, remarkably projecting behind, and very acutely pointed at its apex,

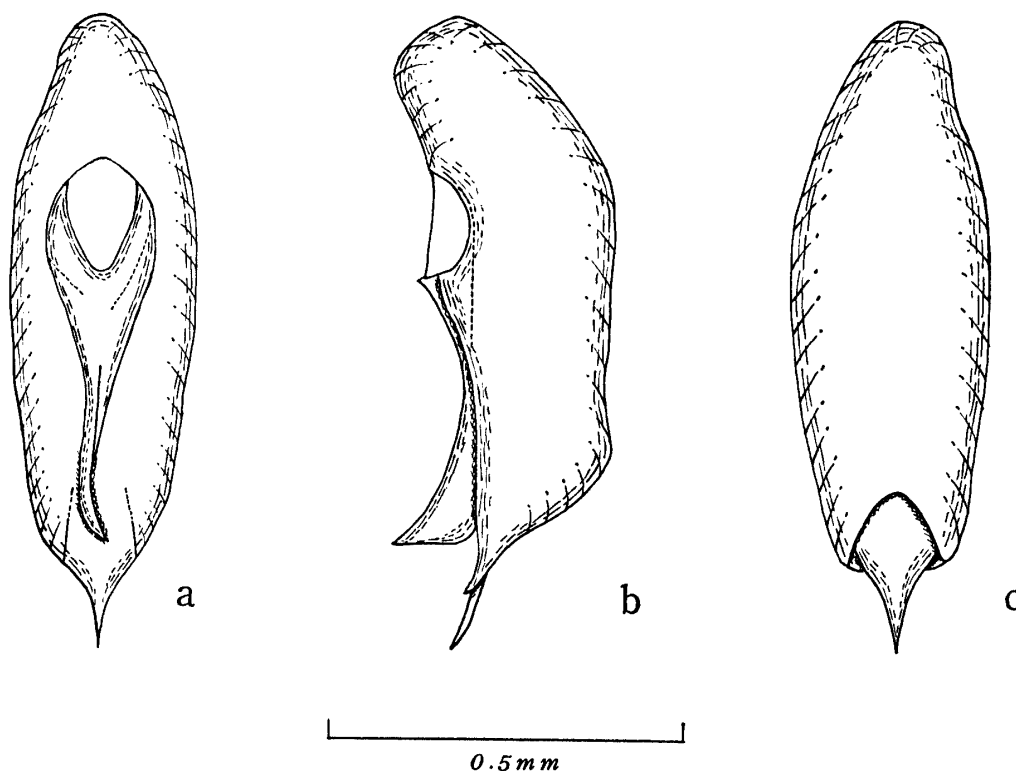


Fig. 7. Male genital organ of *Lobrathium (Lobrathium) riozoi* Y. WATANABE, sp. nov., near Poroshiri-sansô at the NW foot of Mt. Poroshiri-dake (a, ventral view; b, lateral view; c, dorsal view).

ventral side narrowly and longitudinally flattened along the median line. Style symmetrical, very narrow and conspicuously shorter than median lobe, hatchet-shaped in profile, ventral side strongly keeled in apical two-thirds along the median line.

*Type-series.* Holotype: ♂, allotype: ♀, near Poroshiri-sansô (alt. 1,100 m) at the NW foot of Mt. Poroshiri-dake in the Hidaka mountains, Hokkaido, 24-VII-1971, Y. WATANABE leg., and preserved in the collection of the National Science Museum, Tokyo. Paratypes: 4♂♂, 6♀♀, same locality as the holotype, 24 & 27-VII-1971, Y. WATANABE leg., deposited in the collection of the National Science Museum, Tokyo, and of the Entomological Laboratory of Tokyo University of Agriculture.

*Distribution.* Japan (Hokkaido).

The present new species somewhat resembles *L. yoshidai*, but can easily be distinguished from the latter by much smaller size, different coloration of the body and the sparser punctures of the fore parts of body, and is also markedly different from the other members of this genus in the above-mentioned characters.

All the examples of this interesting new species were found together with *Pseudopsis sulcata* NEWMAN from under dead leaves in a forest along the upper course of the Nukabiragawa River near Poroshiri-sansô.

This new species is dedicated to Professor Riozo YOSHII, who aided the author in seeking for it.

## 要 約

今日まで日高山脈から記録されたハネカクシ類はまったく皆無の状態であった。

1971年7月末、筆者は国立科学博物館が主宰した北海道日高山系を中心とする地域の自然史科学的総合研究の第2次調査隊に参加し、主として幌尻岳周辺のハネカクシ類を調査することができたが、その中には下記の新種および1日本未記録種が含まれていたため、それらについて記載発表した。

### 1. *Psephidonus aokii* Y. WATANABE, sp. nov. アオキミズギワヨツメハネカクシ

本新種は幌尻山荘付近（海拔約 1,100 m）の溪流際の小石の下から採集された個体に基づいて記載した種で、体長 3.8 mm、全体黒色で体型は本州の上高地から記載された *P. suenisoni* に類似している。しかし、本新種の体表は強い光沢を有し、前背板の点刻がより疎で、きわめて細かく、さらに雄交尾器の構造が異なっている等の違いによって *P. suenisoni* から容易に区別することができる。

### 2. *Pseudopsis sulcata* NEWMAN スジヒラタハネカクシ（新称）

従来本種は北半球の各地から発見されていたが、日本からは未記録であった。今回の調査で幌尻山荘付近の森林中の落葉下および幌尻岳北カールの高山植物の茂みに造巣されたシマリスの巣の入口に堆積された糞の中の2カ所から採集された。体長 4 mm ならずで全体黒褐色を呈し、前背板および翅鞘に明瞭な縦隆条を持つ特異な形態を呈している。

### 3. *Lobrathium (Lobrathium) riozoi* Y. WATANABE, sp. nov. チビアカナガハネカクシ

本種は、幌尻山荘付近から前述の *P. sulcata* と一緒に採集された個体に基づいて記載した種で、体長 4.2 mm、全体に明るい赤褐色を呈している。近似の *L. yoshidai* とは、上述の特徴のほか、頭部および前背板の点刻がより疎なことによって容易に区別することができる。

なお、今回命名した *P. aokii* および *L. riozoi* は、ともに今回の調査隊で昆虫班として一緒に行動された種々ご高配を賜った青木淳一および吉井良三両博士に献名したものである。

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